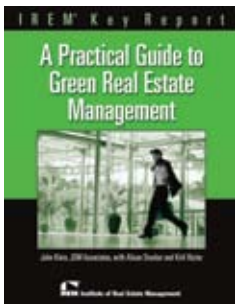


# SEE THE LIGHT Save Big on Energy Costs by Reducing Light Use in Parking Lots



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*About three parking spaces exist for each vehicle in the United States. That much pavement is the equivalent of an 1100-lane highway from New York to San Francisco.*

Parking lot lighting is so commonplace that we seldom think about its costs. Nearly every surface parking lot has some form of lighting and most of it operates all night, every night.

As with most energy-efficiency improvement efforts, an important way to save energy is to reduce operating hours through improved controls. Most controls in parking lots are photo-sensors or timers that turn lights on at dusk and off at dawn. This will average out to 12 hours of lighting per night. For most property types, these hours could be reduced substantially.

Visit your property at night to see who is there. In office buildings, late-night workers and janitorial staff rarely occupy the building past 11 p.m. At that point, potentially two-thirds or more of the lights could be turned off, leaving only a fraction lit for safety and security. If some workers stay later, consider providing them a small, fully lit parking area.

Shopping malls and retail centers have similar opportunities. Most close around 10 p.m., leaving only a skeleton crew of janitors, stockers and security guards. By midnight, many of these workers have also left. Consider reducing lighting levels after closing and reducing them further once workers have left. Also, consider providing a night-parking area. In shopping centers with 24-hour supermarkets, configure lighting appropriately to encourage parking close to the store, using less light in other areas.

All property types can reduce energy consumed by evaluating the technologies used and illumination density. When comparing lighting types, contemplate more than just the lumens

per watt ratio. Using a light source that preserves the true colors seen under natural light sources will also affect how clearly a parking area is lit. Known as color rendering, this lighting can provide safety, security and visual clarity at lower levels. For example, the amber glow of high pressure sodium (HPS) lights can feel disorienting and alien, while the whiter light provided by metal halide, induction, LED, and fluorescent lights can provide better visibility with fewer lumens. This lowers costs, reduces light pollution and improves property aesthetics.

If your facility's parking lot already has good color rendering, evaluate the lighting density to see if some lamps are redundant. In over-lit areas, remove lamps or use lower-powered lamps to provide satisfactory light levels.

Consider an office building parking lot with 400-watt HPS pole lights. At electricity rates of \$0.12 per kilowatt-hour, each light costs \$250 per year in electricity, equipment and maintenance. Simply by turning half the lights off after midnight, property management could extend the average lamp life by 30 percent, reducing per-lamp operating costs by \$75 per year.

Alternatively, the property could replace the HPS lights with 200-watt induction lights at \$400 apiece, which provide better visual clarity, use less energy, are dimmable, work with motion sensors and last 20 years or longer. Turning half the lights off after midnight, annual costs drop by \$160 per lamp. Simple payback for the whole project is around three years. Do the math: at 50 lamps, you save \$8,000 per year.

By evaluating your property's needs and thinking creatively, you can always find new ways to save energy. Parking lot lighting is widely overlooked—even though we see the lights, we often fail to *see the light*. ■